

In the Claims

1. (Currently Amended) A method of remediating media contaminated with halogenated hydrocarbons comprising:

forming Fe-S based inorganic compounds mainly comprising sulfur on at least portions of surfaces of iron powder particles containing about 0.1 to about 2% by mass of sulfur and about 0.06% by mass or less of manganese ~~as the composition~~, based on the mass of the iron powder, wherein the Fe-S based inorganic compounds are formed by precipitation of iron and sulfur contained in the iron powder particle;

subsequently contacting the halogenated hydrocarbons contained in the media with the iron powder; and

causing reduction of halogenated hydrocarbons.

Claims 2 – 4 (Cancelled)

5. (Original) The method according to Claim 1, wherein said media is selected from the group consisting of soil, water and gases.

6. (Original) The method according to Claim 1, wherein about 0.1 to about 10% by mass of the iron powder is contacted with the media containing the halogenated hydrocarbons, based on the mass of the media.

7. (Previously Presented) The method according to claim 1, wherein the halogenated hydrocarbons are selected from the group consisting of trichloroethylene, tetrachloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, trans-1,2-dichloroethylene, 1,1-dichloroethane, dichloromethane, carbon tetrachloride, methyl chloride, chloroform, methyl chloroform, 1,1,2,2-tetrachloroethane, 1,2-dichloropropane, 1,3-dichloropropane, methyl bromide, 2-bromopropane, 1,3-dibromopropane, 1,4-dibromopropane, allyl bromide, PCB and dioxin.

8. (Original) The method according to Claim 1, wherein contacting the iron powder with the media is achieved by spraying on, mixing with or injecting into the media.

9. (Original) The method according to Claim 1, wherein surfaces of the iron powder are wet with at least one or more layers of water molecule layers.

Claims 10 – 12 (Cancelled)

13. (Currently Amended) A method of remediating media contaminated with halogenated hydrocarbons comprising:

forming Fe-S based inorganic compounds mainly comprising sulfur on at least portions of surfaces of iron powder by precipitation of sulfur in the iron powder containing about 0.1 to about 2% by mass of sulfur and about 0.1% by mass or less of manganese ~~as the composition~~, based on the mass of the iron powder;

subsequently contacting the media with the iron powder such that the iron powder contacts the halogenated hydrocarbons contained in the media; and

causing reduction of halogenated hydrocarbons.

14. (Currently Amended) The method according to Claim 1, wherein the forming of Fe-S is conducted by manufacturing the iron powder by water atomization of molten steel ~~of the composition~~.

15. (Previously Presented) The method according to Claim 14, wherein the iron powder is a non-reduced water-atomized iron powder.

16. (Currently Amended) The method according to Claim 13, wherein the forming of Fe-S is conducted by manufacturing the iron powder by water atomization of molten steel ~~of the composition~~.

17. (Previously Presented) The method according to Claim 1, wherein the degree of surface precipitation of the Fe-S based inorganic compounds is 10 or more in a unit of number of particles per $250\ \mu\text{m}^2$.

18. (Currently Amended) A method of remediating media contaminated with halogenated hydrocarbons comprising:

forming Fe-S based inorganic compounds mainly comprising sulfur on at least portions of surfaces of iron powder particles containing about 0.1 to about 2% by mass of sulfur and about 0.06% by mass or less of manganese ~~as the composition~~, based on the mass of the iron powder, wherein the Fe-S based inorganic compounds are formed by precipitation of iron and sulfur contained in the iron powder particle, and wherein the forming of Fe-S is conducted by manufacturing the iron powder by water atomization of molten steel ~~of the composition~~;

subsequently contacting the halogenated hydrocarbons contained in the media with the iron powder; and

causing reduction of halogenated hydrocarbons.

19. (Previously Presented) The method according to claim 1, wherein the S content of the iron particles is about 0.1 to about 0.4%.

20. (Previously Presented) The method according to claim 13, wherein the S content of the iron particles is about 0.1 to about 0.4%.

21. (Previously Presented) The method according to claim 18, wherein the S content of the iron particles is about 0.1 to about 0.4%.

22. (New) The method according to claim 1, wherein the degree of surface precipitation of the Fe-S based inorganic compounds is 10 – 30 in a unit of number of particles per $250\ \mu\text{m}^2$.